



November/December 2018

Winter

CATCH A NETFUL OF FUN

TAKE YOUR FRIENDS
WINTER TROUT
FISHING



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Sunrise shines on seven swans
a-swimming at Riverlands
Migratory Bird Sanctuary in
St. Charles County.

by Noppadol Paothong



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ON THE COVER

Showing Off Her Catch

by David Stonner

GET OUT!

FUN THINGS TO DO
AND GREAT PLACES
TO DISCOVER NATURE

Who cooks
for you?

**LISTEN
FOR THE
BARRED
OWL**

hooting this
question
at night.



Pecan pie for Thanksgiving? You bet!
GATHER RIPE WILD PECANS
on conservation areas this month.

© Natallia Yaumenenka | Dreamstime.com



Fox squirrel



**TAKE A SHOT
AT SQUIRREL
HUNTING**

now through
February 15. Get
an experienced
hunter to show
you how.



**TRY
WINTER
TROUT
FISHING.**

In early
November,
grab your
favorite grown-up
and find a stocked
community lake
near you at **short.**
mdc.mo.gov/ZoH.
Learn more about
winter trout-fishing
fun on Page 12.



**SEARCH FOR
FROST FLOWERS**

after the first hard frost.
These beautiful blossoms are
actually ribbons of ice.



WHAT IS?

DON'T KNOW?

Jump to Page 20 to find out.



- ❶ In winter, I'll fly to your feeder.
- ❷ In spring, for a mate I'll compete.

- ❸ In summer, I'll probe lots of anthills.
- ❹ Because ants are my favorite treat!

Into the WILD winter wetland

Don't stay inside when the snow gets to blowing. Explore a marsh to see wildlife coming and going. (But don't forget to bundle up!)

Did You Know?

The cat's tail or "brown sausage" part of a cattail can contain more than 200,000 tiny, fluffy seeds.

Take a Closer Look

Since wetland soils stay soggy, plants need a way to get oxygen down to their roots. **Cattails** have pipes in their leaves and stems that transport oxygen downward. Cut a cattail leaf in cross section, and you'll see the tiny tubes.

Heads Up!

Never walk out on ice without an adult's permission. Wetlands aren't always shallow, and ice isn't always thick enough to support your weight.



LOOK

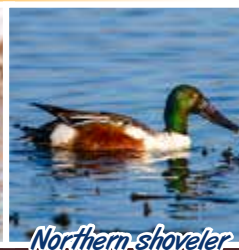
Most wetland mammals come out at night, so you may not see many in the flesh and fur. But footprints in the snow show where they've been. Look for these animal autographs the next time you visit a marsh.

LOOK

Nearly two dozen kinds of ducks migrate through Missouri from fall through spring. Here are a few common ones to look for.



Mallard



Northern shoveler



Northern pintail

Smell

Marsh bottoms pass gas. A handful of marsh muck contains billions of bacteria and other microscopic creatures. Some of them break down dead plants and animals. As they do, they release gases that smell like rotten eggs. Pee-yoo!



LOOK

When it comes to what they eat, **bald eagles** aren't picky. Fish makes up most of their menu, but they won't turn up their beaks at geese or any other meat they find — even if it has been dead for a while.

What Happened Here?

This messy pile of plants and mud is a muskrat house. A **muskrat** heaps up vegetation until it has made a small mound that sticks up out of the water. Then the furry builder digs an underwater entrance and a cozy living chamber inside.



Mallard

What Happened Here?

Bottoms up! This duck is dabbling, which is a fancy way of saying it's dipping its head underwater to grab a bite to eat. The duck will suck water into its beak, let it dribble out the sides, and strain out seeds and insects. Yum!



Gadwall



American wigeon



Green-winged teal

Several quail feathers are scattered around the title. One large feather is on the top left, and two smaller ones are on the top right. A large, fluffy feather is at the bottom right.

A Quail of a Tale

Every day is an adventure
when you live at the bottom
of the food chain.

by
Matt Seek

Meet Bob.

Bob is a northern
bobwhite, aka a quail.

Like most bobwhites, Bob's life is filled with danger. Predators — and there are many — rarely pass up a quail kabob. In addition to being eaten, bobwhites can be killed by blizzards, hailstorms, floods, droughts, fires, food shortages, car bumpers, and mower blades. In short, quail can die in more ways than the characters in a Harry Potter book.

If Bob were human, he'd be the hero of an action movie. But he's not. He's a chubby, cheeseburger-sized bird who just happens to do all of his own stunts. Let's tag along with Bob and see what life on the edge is like for this feathered thrill junkie.

In spring, Bob flies to an elevated perch and starts singing. His favorite song is his own name, a clear *bob-bob-WHITE*. Each wistful whistle announces to nearby females that Bob's looking for love. If a hen shows interest, Bob drops from his perch, fans out his tail feathers, and struts around. If the two hit it off, they soon begin building a nest.



Arthur Morris/Visuals Unlimited, Inc.

A detailed photograph of a quail, likely a Gambel's quail, perched on a thin, dark branch. The bird is facing left, with its head turned slightly towards the viewer. Its beak is wide open, showing a bright red interior. The quail's plumage is a mix of brown, tan, and white, with a prominent pattern of dark, wavy lines on its chest and belly. Its eyes are dark and focused. The background is a soft, out-of-focus yellowish-green.

Hi, I'm
Bob.

The oldest
bobwhite on
record lived more
than 6 years, but most
bobwhites don't live
to see their first
birthday.



Hi, I'm Bobara!

Meet Bobara. Bobara is a female bobwhite, and she has a superpower: She can lay lots and lots of eggs.

For every 10 bobwhites born in Missouri, only one will live to see its first birthday. With such high losses, there's a big need for new quail to take the place of ones that die. That's where Bobara comes in.

Bobara and Bob work together to build a nest. First, they find a clump of prairie grass. Then they use their feet to scrape out a shallow bowl in the dirt. They line the bowl with soft grasses and leaves. Finally, they weave together grass stalks to form a roof and walls over and around their nest. This hides it from predators and shelters it from sun, wind, and rain.



Bath Time!

Ah, nothing beats a good bath! While Bobara is busy incubating eggs, Bob sneaks away for a dust bath. Many birds, quail included, lie in the dirt and throw dust across their backs with their beaks and feet. Instead of making them dirtier, the dust cleans their feathers and helps remove bitey bugs.



When the nest is done, Bobara begins laying eggs, about one each day. Like all bobwhite mamas, she can pack her nest with 10 to 28 eggs, though 14 is most common. If her first nest is destroyed, she'll try again a second and even a third time. Sometimes female bobwhites lay one clutch of eggs, move out to find another mate, and then lay a second clutch. When this happens, her first mate stays behind to take care of the initial nest.

After her last egg is laid, Bobara begins sitting on her eggs to keep them warm. Three weeks later, she feels several tiny taps from beneath her tummy, and within a few hours, all of her eggs have hatched.

A quail egg is about as big as a grape — slightly over an inch long and about an inch wide.



The first egg that's laid is about 18 days older than the last egg laid. But all of the eggs hatch within a few hours of each other.



When they hatch, Bobara's babies are only a bit bigger than bumblebees. Nevertheless, the tiny chicks can scurry about and catch insects soon after leaving their eggs.

Bob and Bobara are caring parents. They shade their babies from the hot sun with their outstretched wings. They snuggle with their chicks to keep them warm at night or when it gets chilly. If Bobara finds a tasty bug, she points to it with her beak and gives a soft *tu, tu, tu* until a chick comes along to snap it up. And if a predator approaches, Bob flutters and drags his wing, pretending that it's broken, to lure the hungry hunter away from his family.

In two weeks, the chicks can fly. In six weeks, they're able to fend for themselves.

A newborn bobwhite weighs about as much as six small paperclips.



Baby quail eat almost nothing but insects for the first six to eight weeks of life. After that, they begin eating more seeds and plants.



Although quail chicks can run right after hatching, they can't control their body temperature until they're 2 weeks old.





Northern harrier

Tastes Like Chicken

Bobwhites would rather walk than fly. When a bobwhite is forced to take to the air, its flight usually lasts only about five seconds.



Bob spends most of his time on the ground. His streaky brown feathers help him blend in with grasses and leaves. This makes it hard for predators to spot him. But if one gets too close, Bob rockets skyward, his stubby wings buzzing like giant angry bees.

Look out! Bob always has to watch for creeping coyotes, sneaky snakes, and swooping hawks. Other animals known to eat quail include foxes, dogs, bobcats, house cats, mink, weasels, raccoons, opossums, squirrels, owls, crows, and blue jays. In fact, just about any creature with teeth or talons will bag a bobwhite if given the chance.

But it isn't just adult quail that fall victim to snack attacks. This striped skunk has sniffed out a quail nest.

Guess what the funky skunky wants for breakfast? That's right. Scrambled eggs.

A mama bobwhite may nest up to three times and produce up to 36 chicks in a single summer.



coyote



striped skunk



western ratsnake



© Steve Maslowski / Visuals Unlimited

Steve Maslowski / Visuals Unlimited, Inc.



Huddle up! In early fall, the members of Bob's family mix together with other quail families. During this time, bobwhites gather into groups called coveys (*kuh-vees*). Each covey is made up of 10 to 20 quail. At night, the birds crowd together in a circle with their tails touching and their beaks pointing out. This helps them stay warm and watch out for sneaking predators. In the morning, Bob and his covey partners wake at sunrise and scurry to a nearby field for breakfast.



When temperatures drop below freezing, a quail must eat at least 50 kernels of corn, 120 soybeans, or 32,000 grass seeds to survive for 24 hours.



Winter is a lean time for Bob. Most of his diet is made up of seeds, such as corn, soybeans, sunflowers, grasses, and ragweed (*ah-choo!*). The colder it gets, the more seeds he must eat to fuel his feathered furnace. And the longer winter stretches, the scarcer seeds become.

But don't worry. Bob is a survivor. He'll make it through this winter. Next winter though, who knows? When you live life on the edge, you're never quite sure how — or when — your tale may end.

Bring Back Bob!

As if things weren't dangerous enough for Bob and his fellow bobwhites, places for quail to live and raise their babies have disappeared throughout Missouri. To thrive, quail need habitats that contain a mixture of weeds, clumpy grasses, shrubby thickets, and crops fields. To learn how you and your parents can give bobwhites a boost, call your local Conservation Department office or visit short.mdc.mo.gov/Zpk.

Hook a Winter Rainbow



And catch the fun of winter trout fishing!

by Bonnie Chasteen | photography by David Stonner

Wintertime is a great time to land one of the best outdoor adventures of the year. We're talking about trout fishing. It doesn't take much equipment, and taking your friends along makes the fishing more fun. Missouri has lots of places to catch pink-striped and spectacularly speckled rainbow trout. Head over to a winter trout area near you, or try one of four awesome trout parks in the Ozarks. Cold weather means no bugs and fewer people, but there's still plenty of hungry fish for you and your friends to catch.

All you need is a grown-up (one who has some fishing gear and knows how to make hot chocolate is best), a few layers of warm clothing, and the right permits to meet Missouri's trout-fishing regulations.



Grab your friends, and let's go winter trout fishing!



How to get Fishing Permits

If you and your folks like to do things online, visit mdc.mo.gov/permits, or download the MO Fishing app at mdc.mo.gov/mobile. Or you can visit a Missouri permit vendor like a sporting goods store.

Where to Go

Visit Your Nearest Winter Trout Area

From northwest Missouri down to Cape Girardeau, the Show-Me State has several community lakes that are stocked with hatchery trout starting in early November. How cool is that?! Some areas let you keep the fish you catch, but some don't. It's best to check the area regulations at short.mdc.mo.gov/ZoH before you go. If you're older than 15, you'll need a Missouri fishing permit. If your chosen area has regulations that let you keep what you catch, you'll need a Missouri trout permit, too.

Try a Trout Park

With on-site fish hatcheries, Missouri's four trout parks have plenty of trout to catch, even in winter, when stocking stops. The winter catch-and-release season starts on the second Friday in November and runs through the second Monday in February. Flies are the only kind of lure allowed during this season. If you're older than 15, you'll need a Missouri fishing permit. Regardless of age, you'll need a Missouri trout permit. You must also release any fish you catch. We'll talk about how to do that a little later.

● Winter Trout Areas
★ Trout Parks

What to Wear

To stay warm, dress in layers. Start with a base layer of wool, polypropylene, or polyester. Avoid cotton undies because they will hold sweat against your skin like a cold, soggy sponge.

Next, layer on a thick fleece pullover, wool sweater, or puffy jacket. A fleece or knit cap will keep your head warm. Fingerless mittens or gloves will keep your hands warm and your fingers flexible. Wear wool socks to keep your toes toasty, and waterproof boots will keep your feet dry.

If it's windy or there's a chance of rain, sleet, or snow, wear a jacket and pants made of waterproof (but breathable) fabric. Nylon or polyester are good choices.





What to Take

If you don't have your own fishing gear, this is where an adult angler comes in handy. They can help you put together a set of gear that includes the following:

- **A spin-casting rod and reel.**
- **Monofilament line.**
- **Net** to help you land your catch.
- **Needle-nose pliers** for slipping a tiny hook out of a trout's lip.
- **Steel split-shot sinker.** Pinch this onto your line to make casting easier and to reach deep holes where the big fish hide.
- **Tackle box** with a few flies, unscented artificial lures, a few bobbers, and a pair of nail clippers for clipping and trimming line.
- **Optional: Stringer or creel** if you fish at an area that permits catch-and-keep.
- **Essential: Thermos of hot chocolate** (to warm up between catches).

How to Cast

If you're fishing a lake, remember that trout like to hang out near rocks and other cover. If you're fishing a stream, cast upstream and let the lure drift with the current. Once your lure's in the water, keep your line tight. Reel in slack as your lure flows downstream, or you'll miss lots of nibbles.

How to Catch and Release

If you feel a trout tug your lure, wait a split second and raise the tip of your rod a bit. Trout are dainty diners. If you pull too hard, you'll yank the hook right out of its mouth. Bring the fish to your net quickly. That way, if you need to release the trout, it won't be too tired to swim. Keep it in the water while you gently remove the hook. To release it, hold it with its head pointing upstream until it swims out of your hand.



Don't Forget to Take Photos

You know what they say: Photos or it didn't happen. Show your friends and family how much fun winter trout fishing can be!

THIS
ISSUE:

SILVER CARP VS ALLIGATOR GAR

Illustrated by David Besenger

Super-Size Me

At 48 inches and 45 pounds, the carp is more than a mouthful for most predators.

Escape Velocity

When spooked, the carp can swim so fast it jumps out of the water.

Long on Power

The gar can reach more than 8 feet long and weigh over 300 pounds.

Twice the Teeth

The gar's top jaw has a double row of long, sharp teeth, perfect for snagging and holding prey.

AND THE WINNER IS...

The gar ambushes the carp, snagging it for the kill. Missouri's native alligator gar took a few silver carp when they can, helping control this invasive fish.

STRANGE but TRUE!

YOUR GUIDE TO ALL THE
UNUSUAL, UNIQUE,
AND **UNBELIEVABLE** STUFF
THAT GOES ON IN NATURE

Sproing! **EASTERN COTTONTAILS** can leap 15 feet in a single bound. If a cottontail were the size of a third grader, it could hop an astounding 55 feet, which would shatter the world record long jump by more than 25 feet.



Wake up, sleepy head! **MEADOW JUMPING MICE** spend more than half their lives sleeping. The drowsy rodents crawl into their burrows in October, curl into a ball, fall deeply asleep, and don't wake up until ... yawn April.



In winter, **BOX TURTLES** take a long nap in shallow burrows. Their shells don't provide much *inshe*llation, but don't worry. These land turtles can partially freeze and still survive. Gives new meaning to "frozen turtle sundae," huh?



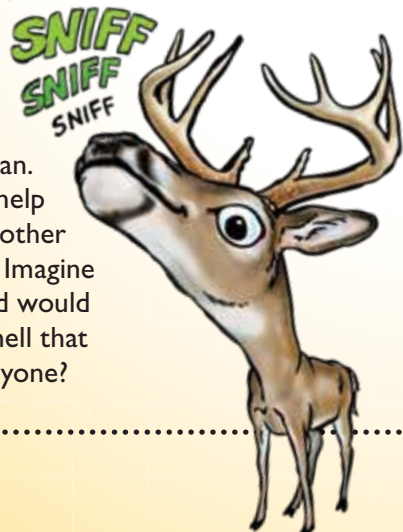
Opposites attract. **WHITE-THROATED SPARROWS** come in two colors. Some sparrows have white stripes on their heads. Others have tan stripes. When choosing a mate, each sparrow almost always picks a bird of a different color.



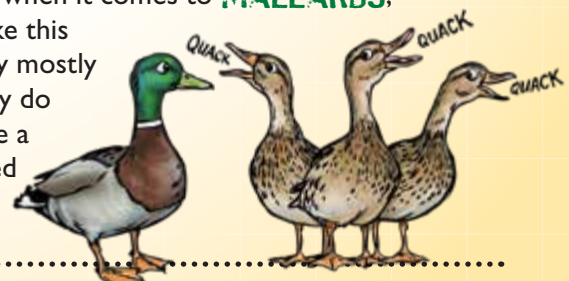
A **GRAY SQUIRREL'S** nose knows no limit when it comes to finding food. The bushy-tailed nut munchers can sniff out acorns that they squirreled away months earlier. They can smell food even when it's buried under a foot of snow.



WHITE-TAILED DEER detect odors 500 to 1,000 times better than people can. Their super sniffers help them pinpoint food, other deer, and predators. Imagine how stinky the world would seem if you could smell that well. Breath mint, anyone?



Quick, what sound does a duck make? *Quack, quack, quack*, right? But when it comes to **MALLARDS**, only females make this sound. Males stay mostly silent. When they do call, it sounds like a raspy, low-pitched *rab, rab, rab*.



HOW TO

Draw a Raccoon

Wish your friends and family happy holidays with this friendly and festive cartoon raccoon.

One way to draw nearly anything is to look for the simple shapes that make up the object and use lines to connect and fine-tune those shapes.

When you begin drawing your raccoon, use a pencil and sketch light, faint lines. If you mess up, it's easy to erase the lines or simply draw over the top of them. When your sketch is finished, you can darken the lines with a marker or crayon.



Once you know how to draw a raccoon,

you can place the masked merrymaker in any holiday scene and create greeting cards for your friends and family. On the inside of the card, don't forget to wish the reader happy holidays and a wild New Year.

INSTRUCTIONS



1 Draw an egg. This will be the raccoon's body. Draw a small oval on top of the egg. This will be the raccoon's head. Add four skinny triangles for arms and legs.



2 Draw a rectangle for a tail. Add two rounded triangles for ears. Add circles with dots in their centers for eyes. Add a black nose. Draw a smiling mouth.



3 Draw a small triangle at the end of each arm and leg. These will become paws. On each side of the head, draw a line straight down until it nearly touches the arm. From there, draw a line slightly up toward the raccoon's chin. These triangles will become cheeks.



4 Add stripes to the tail and five fingers to each paw. To make the raccoon's mask, draw a W between the eyes. Add two short diagonal lines to form pointy eyebrows. Draw curved lines to connect the eyebrows to the cheeks. Draw a half circle over the mouth and nose to complete the mask.



5 Add small rounded triangles inside the ears to make the inner ears. Color the inner ears, mask, paws, and tail stripes black.



6 Draw fur over the head, body, arms, legs, and tail. If you want your raccoon to wear a hat, draw a skinny oval between the ears. Draw a triangle on top of the oval, and a circle on top of the triangle, then add stripes.

XPLOR MOR

BUCKS IN THE BRUSH

Although they're one of Missouri's biggest animals, white-tailed deer have an almost magical ability to disappear in a brushy forest. To spot deer in the woods, try this trick: Look for horizontal lines. Tree trunks, branches, and other plants grow up and down. Among all those plants, a deer's back often stands out as a strong horizontal line.

How many **bucks** (boy deer that often have antlers) and **does** (girl deer without antlers) can you find in this forest?



BUCKS

DOES



WHAT IS?

— FROM PAGE 3 —

family, flickers live in open areas with scattered trees. During the warm months, however, they probe the ground for ants. They hammer at the soil the way other woodpeckers drill into wood. Learn more at mdc.mo.gov/field-guide.

This winter, you might see the northern flicker at your suet feeder. In spring, male flickers perform a “fencing” duel. They face off and stab the air with their beaks while females look on. Members of the woodpecker



FE



Answer: Nine bucks and four does

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FREE TO MISSOURI HOUSEHOLDS

CRITTER CORNER Bobcat



If you hear a hissing growl in the woods this winter, it could be a bobcat looking for love. These medium-sized wildcats look for mates in December. After mating, bobcats lead solitary lives. They live in the woods, where the mama cat will den up and raise her kittens. Should you fear the bobcat? Only if you're a wild turkey, one of the bobcat's favorite foods. Learn more at mdc.mo.gov/field-guide.